REMARKS

Applicant cancels claims 8-9, 15, and 24-25 without prejudice. Applicant's remarks below are preceded by quotations of related comments of the examiner, in small, boldface type.

> **Claims l-2, 6-7, 12, 22, 30-31 are rejected under 35 U.S.C. 103(a)as being unpatentable over US Patent No 5842027 to Oprescu et al (Oprescu)in view of US Patent No. 6601174 to Cromer et al (Cromer).**
>
> **As per claim 1, Oprescu discloses an apparatus comprising:**
>
> - **A device having a high power state and a low power state (column 3, lines 3-l 5); and**
> - **A power management system (14) configured to transition the device to the low power state (115) when a signal is detected on the bus (power usage request).**
>
> **Oprescu fails to disclose a physical layer interface as a part of the system. Cromer teaches:**
> - **An electrically powered physical layer interface (234) to interface between a bus and a network (230).**
>
> **The physical layer improves system performance by utilizing the highest performance connectivity technology (column 5, lines 32-37). It would have been an obvious to one of ordinary skill in the art at the time of invention to combine Oprescu and Cromer. Motivation to combine arises from the improvement in performance gained through the use of a physical layer interface as outlined in Cromer.**

Applicant disagrees. Amended claim 1 requires, among other things, an apparatus having a physical layer interface with at least three power states, "a high power state, a first low power state, and a second low power state". Neither Oprescu nor Cromer teaches or suggest this limitation.

Oprescu discloses a system in which devices, such a disk drive 16, video monitor 18, mouse 20, etc., have different power states. [See, Oprescu FIG. 1]. A power manager 50 (located within host 14) controls the power states of the devices to ensure that the total power drawn by the devices does not exceed a maximum threshold. [See, col. 5, lns. 35-42]. Oprescu shows in FIG. 3 a node 202 that includes a device 205 and a physical layer interface (PHY) 206. In the corresponding description at col. 9, line 56-61 through col. 10, lines 1-6, Oprescu makes clear that the device 205 has multiple power states, not the physical layer interface 206. Accordingly, Oprescu does not teach or suggest a device having *a physical layer interface* that having multiple power states, let alone one that has at least three power states, a high state and a first and second low power state.

Cromer also does not disclose the limitation. Cromer relates to a system for permitting a server to remotely provide a client computer's settings password to the client computer. As shown in FIG. 2, Cromer's system includes a network adapter 230 with a physical layer 234. Cromer's system also includes a power management logic 212 that allows the remote server to send the client computer (through the client's network adapter 230) a wake-up signal that causes the client computer to transition to normal system power. [See, col. 4, lns. 56-64]. Nowhere does Cromer suggest that the physical layer 234 of his network adapter 230 include multiple power states such a high power state, a first low power state, and a second power state.

Because neither reference discloses a device having a physical layer interface with multiple power states, even if one were to combine the Oprescu and Cromer references, it would still not yield the invention in claim 1. According, Applicant respectfully submits that claim 1, along with its dependent claims, are patentable over Oprescu, Cromer, and the other art of record.

As per claim 12, Cromer discloses a system comprising:

- **A power supply (240);**
- **A bus electrically connected to the power supply (208);**
- **A central processing unit in communication with the bus (200)**

Cromer also discloses a system wherein the physical layer interface is a device connecting the bus to the network (230). Cromer fails to disclose the communications device. Oprescu discloses a system comprising:

- **A communications device in communication with the bus (14), the communication device comprising:**
  - **An electrically powered device having a high power state and a low power state (column 3, lines 3-15);**
  - **A power management system (14) configured to transition the device to the low power state (115)when a signal is detected on the bus (power usage request).**

The ability to combine the device and the power management system comes from Cromer 's use of the general-purpose processor, which can be used to carry out the functions of the power manager and signal transmitter of Oprescu. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the device and the power management system. The motivation to combine is the space and power savings gained through the combination of these two elements.

...

As per claim 22, Oprescu discloses a method comprising:

- **Monitoring a bus by a device (14)with a device having a high power state and at least one low power state (column 3, lines 3-15)within a networked computer system having an operating system (10); and**
- **Changing the power state of a device to a low power state (115)when a signal is detected**

on the bus (power usage request).
Oprescu fails to disclose that the device is a physical layer interface. Cromer discloses a method wherein the device is a physical layer interface. As discussed above in reference to claim 1, it would have been obvious to modify the teachings of Oprescu to include the physical layer interface in view of the teaching of Cromer.

Applicant disagrees. Amended claim 12 requires a communications device that includes a "physical layer interface having a high power state, a first low power state, and a second low power state." Amended claim 22 requires a device that includes an "physical layer interface ... configured to include a high power state, a first low power state, and a second low power state."

As explained above, neither Oprescu nor Cromer describe or suggest any device that has a physical layer interface with multiple power states, let alone a physical layer interface that has a high power state and two low power states. Accordingly, Applicant respectfully submits that independent claims 12 and 22, along with their dependent claims, are patentable over Oprescu, Cromer, and the other art of record.

As per claim 30, Cromer and Oprescu, as described above, discloses an apparatus comprising a signal assertion causing a physical layer interface to switch to a low power state. Thus, Cromer and Oprescu also teach a computer program product residing on a computer readable medium for powering down a physical layer interface as a result of a signal asserted on the bus. The examiner takes Official Notice that storing a computer program product on a computer readable medium, such as a disk drive or a diskette, is a well known and generally accepted method of backing up a computer program product.

Applicant disagrees. Amended claim 30 requires a computer program product that includes instructions that cause a processor to "reduce the power state of a physical layer interface from a high power state to either a first or second low power state when [a] signal is detected on [a] bus." As explained above with respect to claim 1, neither Opresu nor Cromer disclose a device having a physical layer interface with multiple power states, let alone a computer program which functions to change the power state of the physical layer in response to a detected signal. Accordingly, Applicant respectfully submits that claim 30, along with its dependent claims, are patentable over the prior art of record.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive,

there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 3/3/05

Stephen W. Romine
Reg. No. 43,056

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

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